UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,666	01/24/2002	Wolfgang Billinger	P67552US0	8422

136 7590 05/17/2006

JACOBSON HOLMAN PLLC
400 SEVENTH STREET N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER	
HOLZEN, STEPHEN A	
ART UNIT	**PAPER NUMBER**
3644	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/053,666	BILLINGER ET AL.	
	Examiner	Art Unit	
	Stephen A. Holzen	3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15,19-28,30 and 32-34* is/are pending in the application.

4a) Of the above claim(s) *24,25 and 28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15,19-23,26,27,30 and 32-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Notes to Applicant

1. Applicant has failed to use the proper status identifiers. Should the applicant fail to use the proper status identifiers in the future the examiner will mail out a notice of non-compliance.

2. Claims 15, 19-28, 30, 32-34 are pending

3. Claims 24, 25 and 28 are withdrawn

4. Claims 15, 19, 21-23, 26, 27,30, 32-34 are rejected under section35 USC 102

5. Claim 20 is rejected under section 35 USC103

Response to Arguments

6. Applicant's arguments filed 2/22/2006 have been fully considered but they are not persuasive.

7. The applicant has argued that #13 and #13a of Hirahara et al are not fittings. The examiner disagrees. Initially it should be noted that the applicant has not defined what all is meant and encompassed by "a fitting" in the originally filed specification.

According to www.wikipedia.org The word fitting broadly means "a part that can attach two or more larger parts"[1]

---

[1] "Fitting." Wikipedia, The Free Encyclopedia. 20 Aug 2005, 03:55 UTC. 2 May 2006, 19:47 <http://en.wikipedia.org/w/index.php?title=Fitting&oldid=21409986>.

Hirahara et al disclose "The box-structure airfoil 10 comprises a composite material upper skin 11 forming a top surface of the airfoil, a composite material lower skin 12 forming a bottom surface of the airfoil, and a composite material spar 13 attached to an extreme forward portion of the airfoil as shown in FIGS. 1 and 2, in which four ribs 14, for instance, and an elongate projection 15 for adhesive bonding of the spar 13 are formed integrally on the inner surface of each skin 11, 12. Both skins 11, 12 and the spar 13 are bonded by a pasty thermosetting adhesive to together form a single structure. Further the spar 13 is made up of flanges 13a located on both sides and a web 13b which together form a U-shaped cross section as shown in FIGS. 1 and 2. FIG. 3 illustrates the location where the box-structure airfoil of FIG. 1 is applied. Clearly then we can see that the fitting is used to attached to both a non-movable structure and a movable structure. The examiner asserts that #13 is a fitting as is commonly understood in the art and that as illustrated in Figure 3 the apparatus illustrated in Figure 1 and 2 is used as an elevator. Elevators are control surfaces, usually at the rear of an aircraft, which control the aircraft's orientation by changing the pitch of the aircraft, and so also the angle of attack of the wing.[2] It is the examiner's position that the elevator 10 is comprised of the elements illustrated in Figure 1 and 2 and that #10 is a movable part connected to the structure member of the tail of the aircraft.

---

[2] "Elevator (aircraft)." Wikipedia, The Free Encyclopedia. 22 Apr 2006, 07:14 UTC. 2 May 2006, 20:03 <http://en.wikipedia.org/w/index.php?title=Elevator_%28aircraft%29&oldid=49563168>.

To outline the examiner's position:

- Fitting = #13b
- Bearing = #13a
- Moveable Part = #11, #14, #15 in combination and illustrated in Figure 1
- #13a&b connect #11/14/15 to the tail of the aircraft (see Figure 3).
- Both skins 11, 12 and the spar 13 are bonded by a pasty thermosetting adhesive to together form a single structure
- The box-structure airfoil 10 comprises a composite material upper skin 11 forming a top surface of the airfoil, a composite material lower skin 12 forming a bottom surface of the airfoil, and a composite material spar 13 (see Col. 4, lines 50-60) made from CFRP (Carbon Fiber Reinforced Polymer, see Col. 5, lines 33-41).
- The movable part (#11-15) is an elevator (see Figure 3)
- The fact that Hirahara et al do not employ a resin transfer molding method is of no consequence since this limitation is a product by process limitation. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even through the prior product was made by a different process.

8. The applicant has argued that a fitting made by a resin transfer modling method would have "distinctive structural characteristics that are distinguishable over fittings

made by other processes." The examiner appreciates applicant's opinion however is not persuaded by opinion alone. The applicant has provided no evidence that the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. Arguments of counsel may be effective in establishing that an examiner has not properly met his or her burden or has otherwise erred in his or her position. In these situations, an examiner may have failed to set forth any basis for questioning the adequacy of the disclosure or may not have considered the whole specification, including the drawings and the written description. However, it must be emphasized that arguments of counsel alone cannot take the place of evidence in the record once an examiner has advanced a reasonable basis for questioning the disclosure. See In re Budnick, 537 F.2d at 538, 190 USPQ at 424; In re Schulze, 346 F.2d 600, 145 USPQ 716 (CCPA 1965); In re Cole, 326 F.2d 769, 140 USPQ 230 (CCPA 1964). The applicant must provide evidence that the process by which applicant's invention is made would be expected to impart distinctive structural characteristics when compared to the structure and process disclosed by Hirahara. The applicant should remember that there already was an affidavit filed on 5/6/2005 however this affidavit was directed overcoming an obvious-type rejection and the examiner is now requesting evidence that RTM provides distinctive structural characteristics that would not be realized by the method of construction used by Hirahara.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 15, 19, 21-23, 26-27, 30, 32-34 rejected under 35 U.S.C. 102(e) as being anticipated by Hirahara et al (6,234,423). Hirahara discloses a fitting = #13b, bearing = #13a, Moveable Part = #11, #14, #15 in combination and illustrated in Figure 10 #13a&b connect #11/14/15 to the tail of the aircraft (see Figure 3); both skins 11, 12 and the spar 13 are bonded by a pasty thermosetting adhesive to together form a single structure the box-structure airfoil 10 comprises a composite material upper skin 11 forming a top surface of the airfoil, a composite material lower skin 12 forming a bottom surface of the airfoil, and a composite material spar 13 (see Col. 4, lines 50-60) made from CFRP (Carbon Fiber Reinforced Polymer, see Col. 5, lines 33-41). The movable part (#11-15) is an elevator (see figure 3). The fact that Hirahara et al do not employ a resin transfer molding method is of no consequence since this limitation is a product by process limitation. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even through the prior product was made by a different process.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirahara in view of Koppelman et al (3,102,559). Hirahara does not disclose using nylon as a reactive material. Koppelman discloses a composite material formed by impregnating woven structure made of nylon fibers with a thermosetting resin (see col. 14, line 22). It would have been obvious to use nylon as the reactive material since nylon allows for improved tensile strengths with relatively high compression strength. Furthermore, it has been held that to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious.)

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 571-272-6903. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sah

TERI PHAM LUU
SUPERVISORY
PRIMARY EXAMINER